

Remarks

This Application has been carefully reviewed in light of the Final Office Action mailed October 10, 2006. Claims 1-2, 4, 7, 11, 14-15, 25-26, 29, 32-34, 40, 45-46 and 48-50 have been amended to advance prosecution. These amendments are not considered necessary for patentability. Claims 1-50 are pending in this Application. Applicants respectfully request reconsideration and allowance of all pending claims.

I. The Claims are Allowable over Barroux

The Examiner rejects Claims 1-7, 12, 13, 17, 24-27, 29, 31, 40, and 44-50 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,182,110 to Barroux ("Barroux"). Applicants respectfully traverse these rejections.

A. *Independent Claims 1, 46, and 49*

Independent Claim 1, as amended, recites:

A job scheduling device for scheduling jobs to run on at least two nodes of at least one computing platform, comprising:

a local job repository installed on each of the at least two nodes and configured to maintain job information on each job submitted to the node where the local job repository is installed, the job information including job parameters needed to execute each job; and

an enterprise scheduling agent installed on each of the at least two nodes and configured to:

access the job information maintained by the local job repository;

determine when to execute each job submitted to the node; and
launch execution of each job submitted to the node based on the determination;

a presentation system configured to accept and validate parameters identifying at least one job to be submitted for execution on at least one of the nodes; and

a job scheduler configured to allocate at least one job based on the parameters to at least one of the nodes and to submit the allocated jobs to the at least one of the nodes;

wherein the job scheduler is communicatively coupled to the at least two nodes by a network.

Independent Claims 46 and 49, recite substantially similar limitations. Applicants respectfully submit that *Barroux* fails to disclose each and every element specifically recited in independent Claims 1, 46, and 49.

Barroux discloses a method and apparatus for efficiently scheduling tasks on a network. (Abstract). The system includes an integrated resource 200 that includes resource engine 208 with task scheduler 302, ProcLoad module 306, and clock process 310. (Figures 2-3; Column 3, Lines 50-54). Integrated resource 200 interacts with typical host 220 via network 202. (Figure 2; Column 3, Lines 54-59). Typical host 220 includes RPC Daemon 222 with agents 224, 226, and 228. (*Id.*). Integrated resource 200 utilizes task scheduler 302, together with ProcLoad module 306 and clock process 310 to build a schedule of tasks and to launch the scheduled tasks. (Column 4, Lines 47-55). Task scheduler 306 determines when a task is to be performed, generates a schedule for the tasks, and sends a message with the schedule to clock process 310. (Figure 5; Column 6, Lines 27-35). Using the schedule generated by the task scheduler, clock process determines when it is time to execute a task. (See Column 6, Lines 42). When clock process 310 determines that is time to execute a task, clock process 310 sends a message to task scheduler 302. (Column 6, Lines 41-42). Task scheduler then passes the message on to ProcLoad module 306, which then launches the task identified in the message. (Column 6, Lines 44-59). All of the task scheduling and launching occurs within integrated resource 200, through the use of task scheduler 302, ProcLoad module 306, and clock process 310. Once a task has been scheduled and launched, the task is performed by agents 224, 226, or 228 in response to commands by ProcLoad module 306. (See e.g., Column 14, Lines 44-46.)

Applicants respectfully submit that *Barroux* fails to disclose, teach, or suggest the combination of elements specifically recited in Claim 1. For example, *Barroux* fails to disclose:

- (1) A local job repository installed on each of the at least two nodes and configured to maintain job information on each job submitted to the node where the local job repository is installed, the job information including job parameters needed to execute each job; and
- (2) An enterprise scheduling agent installed on each of the at least two nodes and configured to: access the job information maintained by the local job repository; determine when to execute each job submitted to the node; and launch execution of each job submitted to the node based on the determination.

Local Job Repository

The Examiner acknowledges that “Barroux does not explicitly teach a local job repository installed on each of the at least two nodes.” (Office Action, Page 9). Applicants respectfully submit that *Barroux* fails to disclose, teach, or suggest any elements “installed on each of the at least two nodes and configured to maintain job information on each job submitted to the node” where the element is installed. Accordingly, *Barroux* fails to disclose each and every element recited in Claim 1.

Enterprise Scheduling Agent

Because *Barroux* fails to disclose “a local job repository installed on each of the at least two nodes,” *Barroux* necessarily fails to disclose “*an enterprise scheduling agent installed on each of the at least two nodes and configured to: access the job information maintained by the local job repository.*” Furthermore, as discussed above, *Barroux* discloses that all of the task scheduling and launching occurs within integrated resource 200, through the use of task scheduler 302, ProcLoad module 306, and clock process 310. Any determination as to when to execute a task is performed by the integrated resource, which is not installed on each of the nodes. Agents 224, 226, or 228 merely perform tasks in response to commands from the integrated resource, after the tasks have been scheduled and launched by the integrated resource. Thus, *Barroux* also fails to disclose “*an enterprise scheduling agent installed on each of the at least two nodes and configured to . . . determine when to execute each job submitted to the node; and launch execution of each job submitted to the node based on the determination*” as recited in Claim 1. Accordingly, *Barroux* fails to disclose each and every element recited in Claim 1.

Independent Claim 1 is allowable for at least these reasons. Independent Claims 46 and 49 are allowable for at least substantially the same reasons as discussed above with respect to Claim 1. For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 1, 46, and 49.

B. Independent Claims 25, 45, and 50

Independent Claim 25, as amended, recites:

A method of scheduling jobs to run on at least two nodes of at least one computing platform, comprising:
determining, at a first location, at least one job to be scheduled based on job parameters for the at least one job;
submitting the at least one job to the at least two nodes, each node having a local job repository and an enterprise scheduling agent installed thereon;
maintaining, at each of the local job repositories, the at least one job submitted to the node where the local job repository is installed;
determining, at each of the enterprise scheduling agents, when to execute the at least one job submitted to the node where the enterprise scheduling agent is installed; and
based on the determinations, executing the at least one job on the at least two nodes under management of the enterprise scheduling agents;
wherein the first location is communicatively coupled to the at least two nodes by a network.

Independent Claims 45 and 50, recite substantially similar limitations. Applicants respectfully submit that *Barroux* fails to disclose each and every element specifically recited in independent Claims 25, 45, and 50. For example, *Barroux* fails to disclose the following elements recited in Claim 25:

- (1) submitting the at least one job to the at least two nodes, each node having a local job repository and an enterprise scheduling agent installed thereon;
- (2) maintaining, at each of the local job repositories, the at least one job submitted to the node where the local job repository is installed;
- (3) determining, at each of the enterprise scheduling agents, when to execute the at least one job submitted to the node where the enterprise scheduling agent is installed; and
- (4) based on the determinations, executing the at least one job on the at least two nodes under management of the enterprise scheduling agents,

As discussed above, the Examiner acknowledges that *Barroux* fails to disclose a local job repository installed on each of at least two nodes. Accordingly, *Barroux* necessarily fails to disclose “*submitting the at least one job to the at least two nodes, each node having a local job repository and an enterprise scheduling agent installed thereon*” and “*maintaining, at each of the local job repositories, the at least one job submitted to the*

node where the local job repository is installed,” as recited in Claim 25. Similarly, because *Barroux* teaches that all of the task scheduling and launching occurs within integrated resource 200, that any determination as to when to execute a task is performed by integrated resource 200, and that integrated resource 200 is not installed on each of the nodes, *Barroux* fails to disclose “*determining, at each of the enterprise scheduling agents, when to execute the at least one job submitted to the node where the enterprise scheduling agent is installed*” and “*based on the determinations, executing the at least one job on the at least two nodes under management of the enterprise scheduling agents,*” as recited in Claim 25.

Independent Claim 25 is allowable for at least these reasons. Independent Claims 45 and 50 are allowable for at least substantially the same reasons as discussed above with respect to Claim 25. For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 25, 45, and 50.

C. Dependent Claims

Dependent Claims 2-24, 27-44, and 47-48 are allowable based on their dependence on the independent claims shown above to be allowable, and further because they recite numerous additional patentable distinctions over the references cited by the Examiner. Because Applicants believe they have amply demonstrated the patentability of the independent claims over the references, and to avoid burdening the record, Applicants have not provided detailed remarks concerning these dependent claims. Applicants, however, reserve the opportunity to provide such remarks if it becomes appropriate to do so. Applicants respectfully request reconsideration and allowance of dependent Claims 2-24, 27-44, and 47-48.

II. The Claims are Allowable over the proposed *Barroux-Williams* combination

To the extent that the Examiner may argue that *Barroux* may be properly combined with *Williams* to disclose, teach, or suggest each and every element recited in Claim 1, Applicants respectfully disagree.

Williams discloses a system for synchronizing files across a network so that applications running on various nodes can share common databases of information.

(Abstract). The system utilizes continuous monitoring and immediate updates to ensure data synchronization. Each node in the system includes a Distributed Data Synchronizer (DDS) that continuously monitors files stored on the local disk drive. (Column 4, Lines 35-37). When a file is modified, the DDS communicates the update to remote nodes. (Column 3, Lines 9-12; Column 4, Lines 38-41 and 51-53). When the remote node receives the update, the DDS running on the remote node updates the corresponding local file at the remote node. (Column 4, Lines 41-44 and 53-54). According to *Williams*, this implementation “has the benefit of immediate access to local files.” (Column 4, Lines 55-56).

Applicants respectfully submit that the combination of *Barroux* with *Williams*, as proposed by the Examiner on Pages 9-10 of the Office action, is improper. *Barroux* teaches a system that allows a user to utilize a centralized integrated resource 200 and task scheduler 306 to schedule tasks across a network based on times at which a task is to be performed or exclusion times when a task is not to be performed at the node level. (See e.g., Column 1, Lines 50-58). The system disclosed in *Barroux* allows the user to ensure that tasks are not executed during peak traffic periods on a node-by-node basis. (See e.g., Column 5, Lines 11-26). In contrast, the system disclosed in *Williams* is implemented to provide “the benefit of immediate access to local files.” (Column 4, Lines 54-58). Thus, if the task scheduling functions of integrated resource 200 disclosed in *Barroux* are combined with the immediately updating remote node DDS disclosed in *Williams*, the combination would delay the updates until off-peak hours and render the remote node DDS in *Williams* unsuitable for its intended purpose. “If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” (M.P.E.P. §2143.01, citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984)). Accordingly, *Williams* actually teaches away from the proposed combination. For at least these reasons, the proposed *Barroux-Williams* combination is improper.

Moreover, even if *Barroux* could be properly combined with *Williams* as proposed by the Examiner, which as shown above it cannot, Applicants respectfully submit that the proposed *Barroux-Williams* combination fails to disclose, teach, or suggest each and every element recited in any of the independent claims. As shown above, *Barroux* fails to disclose multiple elements in each independent claim. Applicants respectfully submit that the

proposed combination of *Barroux* with *Williams* fails to overcome these inadequacies. For example, as with *Barroux*, *Williams* also fails to disclose, teach, or suggest at least:

- (1) “an enterprise scheduling agent installed on each of the at least two nodes and configured to: access the job information maintained by the local job repository; determine when to execute each job submitted to the node; and launch execution of each job submitted to the node based on the determination,” as recited in Claim 1; and
- (2) “determining, at each of the enterprise scheduling agents, when to execute the at least one job submitted to the node where the enterprise scheduling agent is installed; and based on the determinations, executing the at least one job on the at least two nodes under management of the enterprise scheduling agents,” as recited in Claim 25.

In contrast, *Williams* discloses that updates are immediately performed when they are submitted to a remote node without any scheduling at the remote node. The DDS in the remote node does not “determine when to execute each job submitted to the node” nor does it “launch execution of each job submitted to the node based on the determination.” Rather, *Williams* discloses that the updates are simply performed, “[w]hen the remote node receives the record.” (Column 4, Lines 41-42).

Independent Claims 1 and 25 are allowable over the proposed *Barroux-Williams* combination for at least these reasons. Independent Claims 45-46 and 49-50 are allowable for at least substantially the same reasons as discussed above with respect to Claims 1 and 25. For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 1, 25, 45-46, and 49-50, and their dependent Claims.

Conclusion

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and full allowance of all pending claims.

If there are matters that can be discussed by telephone to further the prosecution of this Application, Applicants invite the Examiner to call the undersigned attorney at (214) 953-6581 at the Examiner's convenience.

Applicants believe that no fees are due. However, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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